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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,750	04/09/2004	Yasushi Kuribayashi	036741-0133	8786

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EXAMINER

WRIGHT, KAINOA

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 08/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/820,750

Applicant(s)

KURIBAYASHI, YASUSHI

Examiner

Kainoa BK Wright

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/21/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 6-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/9/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species 1, Figures 7-9 as readable on claims 1-5 in the reply filed on 21 July 2006 is acknowledged.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites, "...the excessive light processing member has the taper surfaces with different angles whose number is the same as that of the optical paths to be aligned by itself." It is unclear what applicant is referring to with "itself". If applicant is referring to the excessive light processing member, it should be noted that the excessive light processing member does not align the optical paths and poses an enablement problem. For purposes of examination, "to be aligned by itself," will be considered a typographical error and not examined.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omura (US 6229656) in view of Shiraishi et al. (2001/0033408).

Omura teaches excessive light processing members 160-162 (Figure 4) for reflecting stray light emitted from optical path synthesizing members 120-122, the excessive light processing members angled to prevent excess light from interfering with the rest of the optical system by deflecting them at an angle away from the (column 9, lines 65-67 through column 10, lines 1-6). Omura teaches an optical scanner with plurality of light sources 101 (Figure 3). Omura teaches pre deflection optical units 102 for shaping the beams before aligning (Figure 3). Omura teaches optical path synthesizing units 120-122 for aligning beam paths (column 6, lines 15-20). Omura teaches a polygon deflector 5.

Omura fails to teach the excessive light processing member of a multi-stage taper construction.

Shiraishi et al. teaches multi-stage taper construction of a beam reflector 25 for reflecting a plurality of light beams at a target, the beam reflector having a number of surfaces 25Y, 25M, 25C, 25B corresponding the a number of different colored light

beams to be reflected (Figure 15). Shiraishi et al. further teaches each of the surfaces to be at a different tilt angle.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the excessive light processing members of Omura to include the beam deflecting structure of Shiraishi et al. in order to deflect a plurality of excess light beams away from the optical path synthesizing members and possibly towards a common target such as an absorber that absorbs stray light.

Allowable Subject Matter

3. Claims 4-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding Claim 4: The specific limitation of an excessive light processing member having a multi-stage tapered construction wherein the tilt angles of all the taper surfaces are set so that reflected light re-enters an optical path synthesizing member from which the light is emitted, the light re-entering at an angle for passing through an upper or lower portion of an optical part present in a direction where the light beams emitted from the optical path synthesizing member advance, is considered to be heretofore unknown in the art. Although this limitation does distinguish over the prior art of record, the examiner points out that the construction of the angles such that the

reflected light re-enters the path synthesizing member is dependent on the placement of the excessive light processing member and can be accomplished, though it is not specifically provided for, by the structure of Omura in view of Shiraishi et al. by placing the excessive light processing member at such a distance from the optical path synthesizing member that the reflected beams re-enter the optical path synthesizing member.


Regarding Claim 5: The specific limitation of an excessive light processing member having a multi-stage tapered construction wherein the tilt angles of some of the taper surfaces are set so that some of the reflected light re-enters an optical path synthesizing member from which the light is emitted, the light re-entering at an angle for passing through an upper or lower portion of an optical part present in a direction where the light beams emitted from the optical path synthesizing member advance; and wherein the tilt angles of some other of the taper surfaces are set so that the other of the reflected light does not re-enter an optical path synthesizing member from which the light is emitted, is considered to be heretofore unknown in the art. Although this limitation does distinguish over the prior art of record, the examiner, similarly to claim 4, points out that the construction of the angles such that the reflected light re-enters the path synthesizing member is dependent on the placement of the excessive light processing member and can be accomplished, though it is not specifically provided for, by the structure of Omura in view of Shiraishi et al. by placing the excessive light processing member at such a distance from the optical path synthesizing member that

some of the reflected beams re-enter the optical path synthesizing member and some other of the reflected beams do not re-enter the optical path synthesizing member.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kainoa BK Wright whose telephone number is (571) 272-5102. The examiner can normally be reached on M-F 8:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vip Patel can be reached on (571) 272-2458. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



KAI
8/25/2006



HAI PHAM
PRIMARY EXAMINER